

Notice of Allowability

Application No.

10/613,061

Examiner

Constantine Hannaher

Applicant(s)

REN ET AL.

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to submissions of 22 May 2006.
2. ☒ The allowed claim(s) is/are 1,3-11,13-20 and 24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

ATTACHMENT(S)

Comment on Submission(s)

1. The amendment filed May 22, 2006 has been entered.
2. This application has been published as US2004/0114711A1 on June 17, 2004.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

--Claim 20. (Currently amended) A method for fabricating a radiation detector, said method comprising:

fabricating an array of detectors, wherein fabricating each detector comprises:

fabricating a first offset array including a first photon incident surface including a plurality of sensor elements including a plurality of photosensor devices;

fabricating a second offset array including a ~~first~~ second photon incident surface including a plurality of sensor elements including a plurality of photosensor devices;

positioning a scintillator array between the first offset array and the second offset array such that the scintillator extends from the first photon incident surface to the second photon incident surface, the scintillator array is configured to direct at least a portion of a plurality of optical photons to the first photon incident surface and the second photon incident surface, the scintillator including a fiber optic scintillator including a plurality of optical fibers bundled in an array and disposed such that the x-rays are incident on the fiber optic scintillator substantially perpendicular to

a respective optical axis of the plurality of optical fibers, the fiber optic scintillator further being optically coupled to at least two of the sensor elements such that the sensor elements are disposed at both ends of the plurality of optical fibers; and

placing the first and second offset arrays within the detector such that the arrays are separated from each other by the scintillator array and are offset from each other by approximately one-half detector pitch normal to an incident x-ray direction, wherein the offset is formed with respect to an axis of the scintillator array.--

This amendment is necessary for consistency in view of the "second photon incident surface" requirement for positioning the scintillator array.

There was no response to a telephone inquiry seeking approval for this specific examiner's amendment. Rather than withdrawing the finality of the last Office action and preparing a Quayle action objecting to claim 20, the examiner has proceeded on the basis of the approval for the same amendment to claim 20 in the parent application 10/308,233.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance: Possin *et al.* discloses a radiation detector 45 comprising an array 20 of detectors 22 each comprising an array 23 comprising a photon incident surface and a scintillator array 34 with a surface coupled to the photon incident surface (Figs. 1 and 2) and in view of Cusano the Examiner maintains the obviousness of repeating the array 20 such that a photon incident surface thereof was coupled to the other surface of scintillator array 34, but upon reconsideration in view of the amendments and applicant's argument, the walls 12, 14, and 16 of Cusano maintaining an alignment between the multiple arrays 18 therein are evidence of non-obviousness, which Hu *et al.* does not overcome, for the offset required by each of independent claims 1, 10, 11, and 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (571) 272-2437. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Constantine Hannaher
Primary Examiner